

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

NEPTUNE TECHNOLOGIES &  
BIORESSOURCES, INC., and  
L'UNIVERSITÉ DE SHERBROOKE,

Plaintiffs,

v.

AKER BIOMARINE ASA, AKER  
BIOMARINE ANTARCTIC AS,  
JEDWARDS INTERNATIONAL, INC., and  
VIRGIN ANTARCTIC LLC,

Defendants.

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AKER BIOMARINE ANTARCTIC AS,  
JEDWARDS INTERNATIONAL, INC., and  
VIRGIN ANTARCTIC LLC,

Counterclaim Plaintiffs,

v.

NEPTUNE TECHNOLOGIES &  
BIORESSOURCES, INC., and  
L'UNIVERSITÉ DE SHERBROOKE,

Counterclaim Defendants.

Case No. 1:09-cv-11946-MLW

**REQUEST FOR ORAL ARGUMENT**

**LEAVE TO FILE OVERSIZED  
BRIEF GRANTED DECEMBER 3,  
2010**

**MEMORANDUM IN SUPPORT OF AKBM ANTARCTIC'S  
RENEWED MOTION FOR SUMMARY JUDGMENT OF NON-INFRINGEMENT**

## INTRODUCTION

Defendants Aker BioMarine ASA, Aker BioMarine Antarctic AS, Jedwards International, Inc., and Virgin Antarctic LLC (collectively “AKBM Antarctic”) respectfully renew their motion for summary judgment of non-infringement pursuant to Federal Rule of Civil Procedure 56(c).<sup>1</sup> As set forth below, no reasonable juror could find that any of the accused methods infringes the asserted U.S. Patent No. 6,800,299 (“the ’299 patent”) because the accused methods lack several limitations required by the claims of the ’299 patent.

Plaintiffs Neptune Technologies & Bioressources, Inc. and L’Université de Sherbrooke (collectively “Neptune”) survived AKBM Antarctic’s initial motion for summary judgment b [REDACTED] and claiming to need additional discovery into the process used to extract that oil. Neptune delayed and ultimately rejected discovery that it represented to be critical, including a deposition of the company that performs these extractions. But Neptune’s decision to bury its head in the sand in an attempt to claim ignorance as to the actual extraction process is not the most troubling development in discovery. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

As an initial matter, neither Neptune nor its expert ever contends that the process currently used to make Superba™ Krill Oil [REDACTED], infringes any claim

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<sup>1</sup> Defendants Jedwards International, Inc. (“Jedwards”) and Virgin Antarctic LLC (“Virgin Antarctic”) are not accused of using the patented process but only of importing, using, or selling krill oil products manufactured by Defendant Aker BioMarine ASA “or one of its subsidiaries.” Docket Entry (“D.E.”) 1 (Compl.) at ¶¶ 13–14. As stated in the Counterclaims filed in this action (Dkt. No. 20) it is not Aker BioMarine ASA, but Defendant Aker BioMarine Antarctic AS that harvests krill and, after extraction of krill oil by third party Naturex S.A., sells krill oil. Because the process used to produce krill oil sold by Aker BioMarine Antarctic AS does not infringe the ’299 patent as set forth herein, Jedwards and Virgin Antarctic also cannot infringe and therefore join this motion.

of the '299 patent. And discovery conclusively has shown that the process previously used to extract Superba™ Krill Oil (in Avignon, France) did not use acetone or a ketone solvent.

As is clear from the un rebutted evidence, the accused processes simply do not use either of these solvents and therefore cannot infringe as a matter of law. Furthermore, all of the independent claims of the '299 patent require the extraction of a “total lipid fraction.” Neptune has simply provided no evidence to show that a “total lipid fraction” is extracted by *any* of the accused processes.

This case is not a close call. The accused manufacturing processes do not practice any claimed method, and the Court should therefore enter judgment of non-infringement.

## **BACKGROUND**

### **I. Procedural History**

Neptune filed its Complaint on November 13, 2009, accusing defendants Aker BioMarine ASA, Jedwards, and Virgin Antarctic of infringing the '299 patent. D.E. 1 (Compl.). On June 24, 2010, Neptune amended its Complaint to add Aker BioMarine Antarctic AS as a defendant. D.E. 91-1 (Am. Compl.). According to Neptune, Aker BioMarine Antarctic AS uses the '299 patent's manufacturing method when it manufactures krill oil products. *Id.* at ¶¶ 4, 14.

On February 3, 2010, Aker BioMarine Antarctic AS—at the time a counterclaim plaintiff—filed for summary judgment of non-infringement of all of the asserted claims. D.E. 30 (Aker BioMarine Antarctic AS's Mot. for Summ. J. of Non-Infringement). In response, Neptune filed an opposition and a motion for additional discovery under Rule 56(f), relying almost exclusively upon the declaration of Dr. Bradley Moore, its expert, and citing, among other things, a purported need to gain a “full understanding of the extraction practices of Aker and its

agents.” *See* D.E. 53 (Pls.’ Opp’n to Aker BioMarine Antarctic AS’s Mot. for Summ. J. of Non-Infringement; D.E. 51 (Pls.’ Mem. in Supp. of Their Mot. to Deny or Continue Mot. for Summ. J. of Non-Infringement of Aker BioMarine Antarctic AS Pursuant to Rule 56(f)). This Court allowed additional discovery on the topic of infringement. *See* D.E. 77 (Order). Now, eight months later, Neptune has declined AKBM Antarctic’s repeated offer of an inspection of the accused extraction processes, [REDACTED] *See* AKBM Antarctic’s Statement of Undisputed Facts In Support Of Renewed Motion For Summary Judgment Of Non-Infringement (“SOUF”) at ¶¶ 78–79. Furthermore, AKBM Antarctic has provided Neptune with multiple samples of the accused products and the raw materials used to manufacture the accused products, yet Neptune has not produced a single test result relating to those samples. SOUF at ¶¶ 80–82, 88. Instead, Neptune merely re-asserts the same arguments, on essentially the same evidence. Discovery has, however, revealed critical new evidence, [REDACTED]

[REDACTED]

## II. Asserted Patent

The ’299 patent is titled “Method of Extracting Lipids from Marine and Aquatic Animal Tissues” and contains four independent claims—claims 1, 12, 13, and 24—all of which are method claims.<sup>2</sup> SOUF at ¶ 7. Claims 1 and 24 require the use of a ketone solvent followed by use of a second solvent, specifically a solvent that is an alcohol or a particular ester, to extract “total lipid fractions” from marine or aquatic animals. *Id.* at ¶¶ 8, 11. In addition, claims 1 and

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<sup>2</sup> The remaining claims—claims 2–11, 14–23, and 25–39—are dependent claims and, as a matter of law, therefore include all of the limitations of the independent claims from which they depend. *See* Shiels Decl. Ex. 1 (’299 patent) at 18:54–19:16; 19: 43–20:3; 20:25–65; *Monsanto Co. v. Syngenta Seeds, Inc.*, 503 F.3d 1352, 1357 (Fed. Cir. 2007).

24 require that a total lipid fraction be recovered from *each* extraction step “by evaporation of the solvent present in the liquid contents” (*i.e.* two evaporation steps are required). *Id.*

Claim 12 requires the use of a ketone solvent to achieve extraction, as well as the recovery of a total lipid fraction containing astaxanthin and canthaxanthin. *Id.* at ¶ 9.

Claim 13 requires the use of a solvent mixture of acetone and ethanol to achieve extraction of a total lipid fraction. *Id.* at ¶ 10. Claim 13 is the only independent claim that specifically requires acetone, as opposed to a “ketone solvent” generally. *Id.* at ¶¶ 8–11.

### III. The Processes For Extracting Superba™ Krill Oil

Neptune vaguely alleged in its Complaint that the manufacture of “Aker Krill Oil Products” infringes the ’299 patent. *See* D.E. 1 (Compl.) at ¶ 12. It focused this contention in its interrogatory responses, accusing Superba™ Krill Oil extracted in Avignon, France. *See* Ex. 2 (Pls.’ and Countercl. Defs.’ First Supp. Resp. to Defs.’ and Countercl. Pls.’ First Set of Interrogs. (Nos. 1–9)) at 6–26 (citing documents describing Avignon Process).<sup>3</sup> Krill oil is, simply, oil extracted from krill—small, shrimp-like crustaceans. *See* D.E. 47 (Pls.’ Statement Pursuant to Local Rule 56.1) at 18, ¶ 6. The only “krill oil product” manufactured and sold by AKBM Antarctic is Superba™ Krill Oil.<sup>4</sup>

<sup>3</sup> Unless otherwise noted, exhibits cited herein are the Exhibits to the Declaration of Matthew J. Shiels in Support of AKBM Antarctic’s Renewed Motion for Summary Judgment of Non-Infringement.

<sup>4</sup> Neptune has also stated that the process used to manufacture “Krill Caps” infringes the ’299 patent (D.E. 91-1 at ¶ 3), but has not provided any basis for such a claim in its contentions or in the report of its expert. *See generally* Ex. 2 (Pls.’ and Countercl. Defs.’ Am. First Supp. Resp. to Defs.’ and Countercl. Pls.’ First Set of Interrogs); Ex. 3 (Moore Rep.); [REDACTED] SOUF at ¶ 47. AKBM will further address the process for manufacturing Krill Caps if and when Neptune is permitted to set forth some basis for alleging infringement.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

SOUF at ¶¶ 58–69, 71–77. The only solvent ever used by Naturex to extract AKBM Antarctic krill oil is ethanol.<sup>5</sup> *Id.* No part of this manufacturing process has ever used the methods claimed by the '299 patent.

**A. Manufacture of Krill Meal<sup>6</sup>**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *Id.* at ¶ 51; Ex. 5 (Gustavsen Dep. Tr.) at 80:1–12. No organic solvents—and, in particular, no acetone, ketone or esters—are used in the production of AKBM Antarctic krill meal or [REDACTED] SOUF at ¶¶ 50–53.

**B. Extraction of Superba™ Krill Oil**

[REDACTED]

Superba™ Krill Oil has been extracted at Naturex's facility [REDACTED]

[REDACTED]

[REDACTED]

<sup>5</sup> [REDACTED]

<sup>6</sup> Neptune has not, in its contentions or in its expert's report, accused the process used to manufacture krill meal or [REDACTED] of infringement. *See generally* Ex. 2 (Pls.' and Countercl. Defs.' Am. First Supp. Resp. to Defs.' and Countercl. Pls.' First Set of Interrogs); Ex. 3 (Moore Rep.); Ex. 4 (Moore Dep. Tr.) at 89:23–90:8.

[REDACTED]

[REDACTED] *Id.* at ¶¶ 71–77. Neptune does not contend that the use of ethanol meets the asserted claims’ requirement for the use of acetone or a ketone solvent.<sup>7</sup> [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] No acetone and no solvents, other than [REDACTED] ethanol, are used [REDACTED]

## 2. Avignon Process

[REDACTED] Naturex extracted Superba™ Krill Oil at its facility in Avignon, France. *Id.* ¶ 57. Like the [REDACTED] in the Avignon Process Naturex used [REDACTED] ethanol to extract krill oil from krill meal. *Id.* at ¶¶ 58–59. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Thus, the manufacture of Superba™ Krill Oil has not at any point used acetone or a ketone solvent for extraction. *Id.* at ¶¶ 69, 76.<sup>8</sup>

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<sup>7</sup> Unlike acetone, which is a three-carbon ketone, ethanol is a two-carbon alcohol. SOUF at ¶ 60. Ethanol is not a ketone or an ester. *Id.* at ¶ 61.

<sup>8</sup> [REDACTED] According to the ’299 patent, ketone solvents are used to dehydrate the animal tissue being extracted. SOUF at ¶ 15. [REDACTED] *Id.* at ¶¶ 49–50, 56. The dehydrating effect of acetone or any other ketone solvent is therefore unnecessary.

### **ARGUMENT**

The undisputed evidence establishes that the processes used to manufacture Superba™ Krill Oil consist of ethanol extraction only and *do not* use either acetone or a ketone solvent. This ethanol extraction method is not covered by any claim in the '299 patent and is, in fact, distinguished from the claimed methods. There is similarly no evidence that the accused processes result in the extraction of the claimed total lipid fraction with the various lipid components that the patent requires. As no reasonable juror could find for Neptune, summary judgment of non-infringement should be entered now.

#### **I. The Accused Processes Do Not Use A Ketone Solvent Or Acetone.**

The accused processes use an ethanol extraction and therefore do not infringe any claim of the '299 patent, all of which explicitly require use of a ketone solvent or acetone to extract lipids from krill meal.

##### **A. The [REDACTED] Does Not Use Acetone or a Ketone Solvent.**

Neptune does not contend that the current process used to extract Superba™ Krill Oil from krill meal—[REDACTED]—infringes the '299 patent. Indeed, the [REDACTED] is not even mentioned in Neptune's infringement contentions or in the expert report of Dr. Moore. SOUF at ¶¶ 43–48. [REDACTED]

[REDACTED]

[REDACTED]

Neptune's decision not to accuse the [REDACTED] is not surprising, as the evidence shows that the [REDACTED] simply does not practice any claim of the '299 patent. AKBM Antarctic has produced voluminous batch records detailing the actual individual extractions performed [REDACTED]. All of these "standard operating procedures," or "SOPs," show that the [REDACTED] extraction with ethanol, and does not use acetone or a ketone



solvent at any point during the extraction of krill oil from AKBM Antarctic krill meal. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

This was confirmed by AKBM Antarctic's expert, Dr. Raben, who personally visited the [REDACTED] and observed the extraction process first-hand. *See* Ex. 6 (Raben Dep. Tr.) at 38:24–40:11. The evidence shows that the [REDACTED] does not infringe any claim in the '299 patent.

Neptune has not cited any evidence that suggests that the [REDACTED] infringes. As an initial matter, Neptune has declined to take discovery offered by AKBM Antarctic that would let Neptune actually see for itself that no acetone or ketone solvents are used in the [REDACTED]. Yet, despite multiple offers from AKBM Antarctic, Neptune declined to inspect either Naturex facility (Avignon [REDACTED] SOUF at ¶¶ 78–79. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The [REDACTED] does not use acetone or a ketone solvent, and it is undisputed that every claim of the '299 patent requires one or the other. It "is axiomatic that a method claim is

directly infringed only if each step of the claimed method is performed.” *Muniauction, Inc. v. Thompson Corp.*, 532 F.3d 1318, 1328 (Fed. Cir. 2008). This Court should therefore enter summary judgment that the [REDACTED] does not infringe any claim of the ’299 patent.

**B. The Avignon Process Did Not Use Acetone or a Ketone Solvent.**

The Avignon Process was an ethanol extraction. [REDACTED]

[REDACTED]

[REDACTED] It did not involve the use of any extraction solvent other than ethanol, and therefore did not involve the use of acetone, or a ketone solvent, as required by the claims of the ’299 patent. All of the evidence in this case confirms this fact. [REDACTED]

[REDACTED]

[REDACTED]

**1. The evidence shows that no acetone or ketone solvent was ever used in the Avignon Process [REDACTED]**

The documents, deposition testimony and declarations in evidence all confirm that no acetone has ever been used to extract Superba™ Krill Oil from krill. AKBM Antarctic has provided almost 1,800 pages of SOPs from Avignon—documenting each and every extraction conducted in Avignon during the relevant time period—as well as sworn deposition testimony from two personal and Rule 30(b)(6) witnesses, Anne Grethe Gustavsen and Svein Ivar Holm, and the signed declaration of Yohan Rolland, a Naturex employee at the Avignon facility during the period in which the Avignon Process was used. *See* Ex. 5 (Gustavsen Dep Tr.); Ex. 7 (Holm Dep. Tr.); D.E. 35 (Declaration of Yohan Rolland (“Rolland Decl.”)). All of this evidence clearly shows that in Avignon, Superba™ Krill Oil was extracted using ethanol as the sole extraction solvent. SOUF at ¶¶ 56–69. [REDACTED]

- Despite this overwhelming evidence, Neptune still feigns ignorance and suggests that acetone could nonetheless have been used in the Avignon Process to extract Superba™ Krill Oil from AKBM Antarctic krill meal.<sup>10</sup> Neptune bases its contention on the expert report of Dr. Bradley Moore. But Dr. Moore does not actually take the position that the Avignon Process infringes. [REDACTED]

A series of horizontal black bars of varying lengths, some with gaps, representing a stylized or abstract graphic. The bars are arranged in a vertical sequence, with some bars being solid and others having a gap in the middle. The overall effect is a rhythmic, abstract pattern.

11

[REDACTED]

[REDACTED]

[REDACTED] Neptune asks the Court to make an improper “speculative leap” and to ignore the fact that AKBM Antarctic’s explanations are “equally plausible” alternatives. *See E-Pass Techs., Inc. v. 3Com Corp.*, 473 F.3d 1213, 1222 (Fed. Cir. 2007) (finding circumstantial evidence of infringement insufficient to defeat summary judgment where it “require[d] too speculative a leap to” conclude that direct infringement actually occurred); *Elantech Devices Corp. v. Synaptics, Inc.*, No. C 06-1839 PVT, 2008 WL 4058722, at \*4 (N.D. Cal. Aug. 27, 2008) (holding plaintiff’s “own purchase and testing of . . . laptops that have the ability to perform the patented methods requires ‘too speculative a leap’ to conclude that [others] . . . actually performed the patented methods”); *Veritas Operating Corp. v. Microsoft Corp.*, 562 F. Supp. 2d 1141, 1191 (W.D. Wash. 2008) (granting summary judgment of non-infringement where plaintiffs’ evidence revealed a number of different scenarios in which the asserted claims would not be infringed); *see also Surfware, Inc. v. Celeritive Techs., Inc.*, No. CV 08-6753 AHM, 2009 WL 605803, at \*4–5 (C.D. Cal. Mar. 9, 2009) (denying motion for a preliminary injunction when patentee only presented evidence that the accused method produced the same output as the claimed method, but failed to show that output was achieved using the same steps as the accused method.). Even if this Court were to ignore the undisputed errors in the testing discussed by Dr. Moore (discussed in the following section), his observations are far too equivocal to support an infringement claim in light of the actual evidence in this case.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] But attorney argument and unsupported assumptions are not a sufficient basis for a claim of infringement. *See Febus-Rodriguez v. Betancourt-Lebron*, 14 F.3d 87, 91 (1st Cir. 1994); *E-Pass Techs., Inc.* 473 F.3d at 1222; *Elantech Devices Corp.*, 2008 WL 4058722 at \*4.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] When the language of a claim disclaims—  
implicitly or explicitly—certain subject matter, the excluded subject matter may not be reclaimed  
through the doctrine of equivalents. *See Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420,  
1425 (Fed. Cir. 1997) (holding that patentee could not reclaim through the doctrine of  
equivalents a structure that was excluded in the claim language); *Ethicon Endo-Surgery, Inc. v.*  
*U.S. Surgical Corp.*, 149 F.3d 1309, 1317 (Fed. Cir. 1998) (subject matter is “specifically  
excluded” from coverage under the doctrine of equivalents if its inclusion is “inconsistent with  
the language of the claim”); *see also SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys.,*  
*Inc.*, 242 F.3d 1337, 1347 (Fed. Cir. 2001) (reclaiming excluded subject matter through the  
doctrine of equivalents would “undermin[e] the notice function of a patent.”)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] “An element in the accused product is equivalent to a claim limitation if the differences between the two are ‘insubstantial’ to one of ordinary skill in the art.” *Wavetronix LLC v. EIS Elec. Integrated Sys.*, 573 F.3d 1343, 1360 (Fed. Cir. 2009). “A plaintiff can prove equivalence by showing on a limitation-by-limitation basis that the accused product performs substantially the same function in substantially the same way with substantially the same result as each claim limitation of the patented product.” *Id.* (citation omitted).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Claim 13 only covers solvent mixtures where both solvents contribute to the extraction of lipids. Indeed, the language of the claim itself shows that the claim covers a *solvent mixture* (i.e., a mixture of solvents) of *ethanol and acetone* that *achieves extraction* of the soluble lipid fraction. In other words, the claim language shows that both components of the acetone/ethanol mixture must act as *solvents*.<sup>13</sup> [REDACTED]

BY MS. HOLLIS: Q. Would a trace amount of acetone be enough to actually dehydrate the animal material you are working with? (Interpreter translating)

<sup>13</sup> The Concise Dictionary of Chemistry defines the term “solvent” to mean “[a] liquid that dissolves another substance or substances to form a solution.” *The Concise Dictionary of Chemistry*, 265 (1985).

MS. ABDULLAH: Objection. Lacks foundation. Calls for speculation. Calls for a legal conclusion.

DR. BEAUDOIN: No.

*See* Ex. 10 (Beaudoin Dep. Tr.) at 157:9–16.

**iii. Neptune's doctrine of equivalents arguments fail.**

Neptune's doctrine of equivalents analysis appears to rest on two improper comparisons.

First, ignoring the actual claim language,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**II. None Of The Accused Processes Extract A “Total Lipid Fraction.”**

All of the independent claims of the '299 Patent require the extraction of a “total lipid fraction.” While Neptune and AKBM Antarctic disagree on the proper scope of the term, Neptune has failed to produce *any* evidence to support a finding of infringement under either construction.

**A. The Proper Construction of the Term “Total Lipid Fraction”**

The Applicants for the '299 patent very specifically defined the term “total lipid fraction” as used in the '299 patent claims. In the patent and during prosecution, they defined it to mean “lipid fractions encompassing neutral acyl lipids including glycerides, free fatty acids and cholesterol esters; polar lipids including glycerophospholipids, glyceroglycolipids and sphingolipids; terpenoids including sterols, chlorophylls and carotenoids including astaxanthin (at least 75 µg/g for krill extracts) and canthaxanthin (at least 250 µg/g for krill extracts).” *See*



Ex. 1 ('299 patent) at 7:18–39; Ex. 11 ('299 patent Oct. 23, 2003 Office Action Resp.) at NEP\_AKBM00000060–66. The Applicants defined it this way in their attempt to distinguish prior art and secure issued claims. *See id.* Now that Neptune is in litigation, however, Neptune changes course and proposes that the term “total lipid fraction” means “[t]he lipid portions of the naturally occurring substances from marine or aquatic animal material.” *See* Ex. 12 (Pls.’ Disagreements With Defs.’ Proposed Constructions) at 1, 2. Both parties appear to agree that a “total lipid fraction” is a fraction containing at least some amount of every type of lipid found in a source material. [REDACTED]

[REDACTED] The actual dispute between the parties is centered upon the specific types of lipids found in a “total lipid fraction” for krill. AKBM Antarctic turns to the specification and prosecution history of the '299 patent itself to determine the lipid types found in a “total lipid fraction” for krill. Neptune, on the other hand, proposes a litigation-driven construction that ignores the intrinsic evidence.

The language of the claims themselves requires that the claimed processes must result in *total* lipid fractions. One of ordinary skill in the art would understand that *total* lipids means all of the lipids found in the sample. [REDACTED]

[REDACTED] Otherwise, the word “total” would lack any meaning in the claim and any “lipid fraction” would be covered.

The specification of the '299 patent describes, among other things, the extraction and identification of lipids from krill. Those lipids identified in the specification would therefore be part of the “total lipids” of krill. Specifically, the '299 patent states that the lipids in krill include:

- cholesterol esters, methyl esters, triglycerides, free fatty acids, cholesterol, diglycerides, and monoglycerides (Ex. 1 ('299 patent) at Figure 8);
- neutral lipids, cephalin, lecithin (a glycerophospholipid), sphingomyelin (a shingolipid), and lysolecithin (a glycerophospholipid) (Ex. 1 ('299 patent) at Figure 13); and
- astaxanthin and canthaxanthin (Ex. 1 ('299 patent) at Table 17, 17:35–50).

A total lipid fraction must therefore include all of these types of lipids.

Finally, the prosecution history of the '299 patent further compels AKBM Antarctic's proposed construction of the term "total lipid fraction." During the prosecution of the '299 patent, the Examiner rejected all of the proposed claims as obvious in light of the prior art under 35 U.S.C. § 103(a). SOUF at ¶ 25. In his rejection, the Examiner stated that that:

Each step in this extraction is well known in the art. Both JP 360035057A and Collin disclose that acetone is a conventional extractant for marine animals for the recovery of lipid pigments containing astaxanthin and canthaxanthin. CA 2,155,571 discloses that lower alcohols such as ethanol are known to extract long chain polyunsaturated fatty acids from marine organisms. Finally WO 8401715 discloses that after lipid extraction of krill, the remaining solid phase contains active enzymes.

*Id.*

In response to the Examiner's rejection, Applicants filed an Amendment in Response to Office Action on October 23, 2003 and argued that their process was not obvious because the prior art did not teach the extraction of "total lipids" using a ketone solvent and alcohol or ester of acetic acid. First, Applicants explicitly defined the term "total lipid":

"Within its generally recognized meaning and within the meaning of that which is recited by the claims, the term "lipid" refers to naturally occurring substances soluble in organic solvents, but insoluble in water. The diverse groups of substances encompassed by this definition can be divided into two broad classes: the acyl lipids and the terpenoids (minor components). The acyl lipids may then be subdivided into further subclasses: neutral acyl lipids (glycerides, free fatty acids and cholesterol esters), and polar lipids including glycerophospholipids, glyceroglycolipids and sphingolipids. Terpenoids are comprised of two

subclasses of minor components: the sterols and the chlorophylls and carotenoids. Carotenoids constitute a very minor constituent of lipids in marine animals. The Examiner is referred to Table 17 on page 29 of the present application providing the content in astaxanthin and canthaxanthin of fractions obtained and to page 10, lines 26 to 31 where it is indicated that the content of astaxanthin is about 75-124µg/g and the content of canthaxanthin is about 250-700µg/g. ***It is apparent throughout the present application that the term “total lipid” as used therein is meant to encompass all these various types of lipids and that the method of the present invention is able to extract all these various types of lipids.***”

SOUF at ¶ 26.

Applicants then relied on their detailed definition of “total lipids” to argue that their invention was not obvious in light of the prior art:

- “Prior to the present invention, the only solvents that appeared to produce good results to extract total lipids from Krill was a combination of chloroform and methanol. . . . Furthermore, although acetone was used to extract certain components of lipids, it was never disclosed to extract total lipids from marine and aquatic animals.” *Id.* at ¶ 27.
- “It is respectfully submitted that JP 360035057A, Collin and CA 2,155,571, do not describe the use of acetone or ethanol for extracting ‘total lipids’ within the meaning of the present application but to extract only a small fraction of total lipids . . .” *Id.* at ¶ 28.
- “In stark contrast, the method of the present invention is directed to an extraction of total lipids of marine and aquatic animals . . . WO 8401715 does not disclose or suggest a method for extracting total lipids from marin[e] and aquatic animals with a ketone solvent . . .” *Id.* at ¶ 29.

Applicants have therefore explicitly defined the term “total lipid” in the prosecution history in order to overcome a rejection. Neptune may not now ignore this definition in an attempt to recapture lipid fractions that do not contain each and every lipid in the detailed list recited to the Examiner. *See Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1349 (Fed. Cir. 2004) (holding that the statements made to examiner to overcome a rejection during prosecution of the asserted patents limited the scope of the patent claims). AKBM Antarctic’s definition of “total lipid fraction,” which lists all of the lipid types recited by Applicants in the prosecution history, is the correct construction of the term “total lipid fraction.”

**B. Neptune Has Not Adduced Any Evidence Showing That the Accused Processes Extract the Claimed Total Lipid Fraction**

The only evidence cited to support Neptune's claim that a "total lipid fraction" is extracted are citations to the approximately 1,800 pages of SOPs from the Avignon Process produced by AKBM Antarctic and an excerpt from Jedwards' website. *See* Ex. 2 (Pls.' and Countercl. Defs.' First Supp. Resp. to Defs.' and Countercl. Pls.' First Set of Interrogs. (Nos. 1–9)) at 6–26; Ex. 3 (Moore Rep.) at Ex. D. These documents do not show the extraction of sphingolipids, glyceroglycolipids, or canthaxanthin—all of which are part of the "total lipid fraction" of krill. *See* Ex. 9 (Raben Rep.) at ¶¶ 65–66. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Neptune has no evidence to support a claim that any of the accused processes extract the claimed "total lipid fraction."<sup>14</sup> Neptune's unsupported allegations are insufficient to defeat a summary judgment motion; rather, "the nonmoving party must adduce specific, provable facts which establish that there is a triable issue." *Febus-Rodriguez*, 14 F.3d 911, 913 (9th Cir. 2001); *see also Crown Operations Int'l v. Solutia, Inc.*, 289 F.3d 1367, 1375 (Fed. Cir. 2002). Because Neptune has failed to present evidence showing the presence of this claim element, Neptune has failed to meet its burden and summary judgment of non-infringement should be entered for all of the accused processes.

<sup>14</sup> Even under Neptune's construction of the term "total lipid fraction," Neptune has failed to present any evidence showing (a) what lipids would be expected to be found in the "lipid portions of the naturally occurring substances" of krill; and (b) whether those lipids are found in Superba™ Krill Oil. Therefore, Neptune has failed to produce evidence under either construction.

Additionally, Claim 12 of the '299 patent explicitly requires the extraction of canthaxanthin. Therefore, Neptune has failed to meet its burden to show that claim 12 is infringed. Summary Judgment of non-infringement should therefore be entered for all processes regarding claim 12.

### **CONCLUSION**

For the reasons stated above, the Court should grant summary judgment of non-infringement.

Dated: December 7, 2010

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that on December 7, 2010, a true and correct copy of the foregoing **AKBM ANTARCTIC'S STATEMENT OF UNDISPUTED FACTS IN SUPPORT OF RENEWED MOTION FOR SUMMARY JUDGMENT OF NON-INFRINGEMENT** filed through the ECF system, will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as nonregistered participants on December 7, 2010.

*/s/ Matthew J. Shiels*\_\_\_\_\_